In the Claims:

Claims 1-8 (Canceled).

Claim 9 (Original): A method of forming a trench isolation layer of a semiconductor device, comprising the steps of:

forming a trench-etching pattern for defining an active area on a substrate;

forming an isolation trench on the substrate using the trench etching pattern as an etching mask;

forming a silicon nitride liner on an inner wall of the trench;

forming a silicon oxide liner on an inner side of the silicon nitride liner;

performing heat treatment for hardening the silicon oxide liner;

filling the trench having the silicon oxide liner with a first buried layer;

partially recessing an upper surface of the first buried layer by etching; and

filling the trench by depositing the second buried layer on the first buried layer whose upper surface is partially recessed.

Claim 10 (Original): The method of claim 9, further comprising a step of forming a thermal oxide layer on the inner wall of the trench, between the step of forming the trench and the step of forming the silicon nitride layer.

Claim 11 (Original): The method of claim 9, wherein the silicon oxide liner includes an HTO oxide layer, and the heat treatment is performed over about 1100 °C for about 30 minutes to about 90 minutes.

Claim 12 (Original): The method of claim 9, wherein the step of filling the first buried layer includes an SOG layer, and a curing step for changing the SOG layer into a silicon oxide layer is further comprised, before the step of etching the first buried layer.

Claim 13 (Original): The method of forming the trench isolation layer of claim 12, wherein the SOG layer includes a polysilazane series material, and the curing step is performed at a temperature of about 700 °C to about 800 °C for about 10 minutes to about 60 minutes.

Claim 14 (Original): The method of forming the trench isolation layer of claim 9, wherein the step of depositing the second buried layer includes HDP-CVD.

Claim 15 (Original): The method of forming the trench type isolation layer of claim 9, further comprising the steps of:

exposing an upper part of the trench etching pattern, by removing the second buried layer with a planarization etching; and

selectively removing the trench etching pattern.

Claim 16 (Original): The method of forming the trench type isolation layer of claim 9, wherein the step of etching the first buried layer is processed by wet etching.